Sterne Kessler
Goldstein Fox

February 27, 2003

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Commissioner for Patents
Washington, D.C. 20231

Re: U.S. Utility Patent Application
Appl. No. 09/972,019; Filed: October 5, 2001
For: **Low Offset and Low Glitch Energy Charge Pump for PLL-Based Timing Recovery Systems**
Inventors: Myles H. Wakayama
Our Ref: 1875.2070002

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Amendment and Reply under 37 C.F.R. § 1.111; and
2. Return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 3152
Myles H. Wakayama	Art Unit: 2817
Appl. No. 09/972,019	Examiner: A. Kinkead
Filed: October 5, 2001	Atty. Docket: 1875.2070002
For: **Low Offset and Low Glitch Energy Charge Pump for PLL-Based Timing Recovery Systems**	

Amendment and Reply under 37 C.F.R. § 1.111

Commissioner for Patents
Washington, D.C. 20231

Sir:

In reply to the Office Action dated **December 31, 2002**, (PTO Prosecution File Wrapper Paper No. 7), Applicant submits the following Amendment and Remarks. This Amendment is provided in the following format:

(A) A clean version of each replacement paragraph/section/claim along with clear instructions for entry;

(B) Starting on a separate page, appropriate remarks and arguments. 37 C.F.R. § 1.111 and MPEP 714; and

(C) Starting on a separate page, a marked-up version entitled: "Version with markings to show changes made."

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

Please replace pending claim 45 with the following new claim 45.

45. (Amended) A method of controlling a charge pump having two parallel current paths formed of transistors, each current path having an output node and coupled between a first current source and a second current source, said charge pump operating within a phase lock loop, the method comprising the steps of:

detecting a phase or frequency characteristic of an input signal to produce an output signal;

receiving said output signal at said charge pump and using said output signal to produce a charge pump control signal;

generating a characteristic current using one of said first current path and said second current path in response to said charge pump control signal; and

controlling a value of one of said first current source and said second current source to minimize D.C. offsets resulting from parasitic capacitances of said transistors.